MSAR Bacteria TMDL Task Force Meeting May 19, 2020

Potential Next Steps/Actions



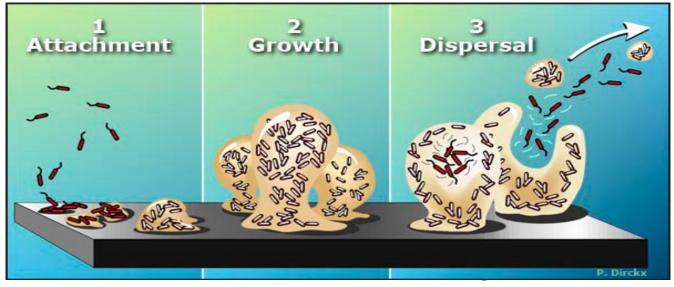
- Potential TMDL Related Revisions
- Potential Special Study regarding releases from bottom sediments
- Draft Schedule
- Timing Issues for Consideration
- Request for Task Force Direction

Potential TMDL Related Revisions

- Restructure TMDL
 - Existing
 - Dry Summer Conditions (April 1 October 31)
 - Wet Winter Conditions (November 1 – March 31)
 - Potential New Conditions
 - Define dry/wet conditions
 - Base compliance on condition rather than season
- Update/Evaluate WLAs & LAs
- Add in new/additional responsible parties
- Adjust compliance schedules
- Update TMDL Implementation Plan

Special Study

- Synoptic study 77 percent of *E. coli* load in Santa Ana River comes from non-human sources upstream of MS4 inflows
- Recommended study to evaluate potential role of releases colonies in bottom sediment



Free-floating bacteria attach to surface

Bacteria colonize surface, produce complex three-dimensional structure that develops within hours Bacteria can detach to propagate downstream





Collect site-specific data to assess the extent to which naturalized *E. coli* exists in the bottom sediments or biofilms of the TMDL waters

Sediment samples over different seasons

Multiple sites within focus reaches

Coupled with overlying water samples

Special Study

Quantification of key factors influencing colony formation, growth, and releases to overlying water (e.g., nutrients, dissolved organic carbon, and temperature, flowrate)

Releases occurring under turbulent (wet weather or large deminimus flows) and quiescent (typical dry weather) flow conditions

Special Study

General Bacteroidetes analysis provides a measure of fresh fecal biomass in water samples from controllable (human, dog) and uncontrollable (e.g. bird, pig)

Absence of Bacteroidetes, nearly all of the *E. coli* loading can be deduced as originating from naturalized colonies (an uncontrollable source in Basin Plan)

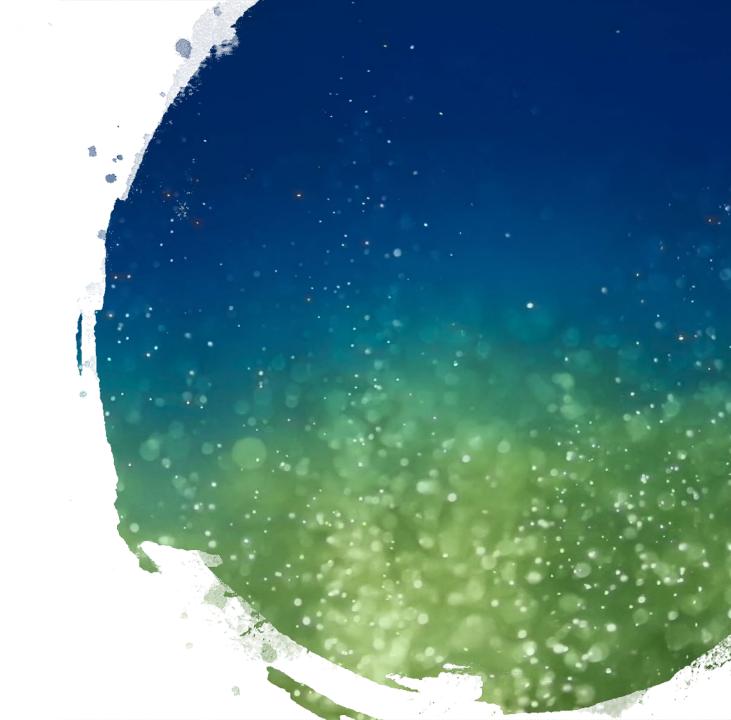
Task	Activity					-	•				١	/ear (C	Quarte	r)	•	-		-						
		2020		2021				2022				2023				2024					2025			
		3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		4	1	2	3	4
1	Special Studies/Technical Analyses																							
2	1 st Draft of TMDL Technical Report																							
3	2 nd Draft of TMDL Technical Report																							
4	Draft Basin Plan Revisions (State Water Board consistency)																							
5	Substitute Environmental Document; Economic Analysis																							
6	Final TMDL Technical Document																							
7	Final Draft Revisions to Basin Plan																							
8	Preliminary Administrative Record																							
9	Public Workshop																							
10	External Scientific Peer Review																							
11	Response to Peer Review Comments																							
12	Draft Staff Report																							
13	Workshop/Public Comment & Response																							
14	Board Hearing to Consider Basin Plan Amendments																							
15	Final Administrative Record																							
16	State Water Board Approval of Basin Plan Amendment																							
17	Office Administrative Law Review																							
18	EPA Approval																							
19	Updates to CBRP/Other TMDL Implementation Plans																							

Timing Issues for Consideration

Santa Ana Water Board's Basin Plan Amendments

Municipal Stormwater Permits

Santa Ana Water Board TMDL Priorities



Request for Task Force Direction



PREPARATION OF RFP FOR SPECIAL STUDY PREPARATION OF RFP FOR PREPARATION OF TECHNICAL REPORT TO SUPPORT REVISION OF MSAR TMDL